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PATTERSON & SHERIDAN, LLP/ SEDNA PATENT SERVICES, LLC 595 SHREWSBURY AVENUE SUITE 100 SHREWSBURY, NJ 07702			VAN HANDEL, MICHAEL P	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/10/2008 has been entered.

Response to Amendment

1. This action is responsive to an Amendment filed 3/10/2008. Claims **1-25, 27, 28** are pending. Claims **1, 2, 12, 28** are amended. Claim **26** is canceled. The examiner hereby withdraws the rejection of claims **1-11** under 35 U.S.C. 112, first paragraph, in light of the amendment.

Response to Arguments

1. Applicant's arguments regarding claims **1, 2, 12, and 28**, filed 3/10/2008, have been fully considered, but they are not persuasive.

Regarding claims **1, 2, 12, and 28**, the applicant argues that Ellis et al. fails to teach or suggest at least *storing dynamically*, in a mass storage device and for a predefined period of time, compressed audiovisual data received from said desired transmission channel according to a title plan generated by a time shift scheduler, wherein said title plan includes a plurality of content,

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wherein at least one of said plurality of content has a variable duration, *wherein storing dynamically comprises continually updating an allocation of memory in a mass storage device for said at least one of said plurality of content having a variable duration* (italicized for emphasis). The examiner respectfully disagrees. The applicant specifically argues that Applicants' invention teaches that upon utilization of the predetermined amount of allocated memory, memory sufficient to store an additional hour's worth of content is allocated and the process is repeated as necessary until reception of the variable length time-shifted content has terminated. The examiner notes; however, that the features upon which applicant relies (i.e., upon utilization of a predetermined amount of allocated memory, memory sufficient to store an additional hour's worth of content is allocated and the process is repeated as necessary until reception of the variable length time-shifted content has terminated) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As noted in the Office Action mailed 1/09/2008, Ellis et al. discloses that a user may cache programs in real-time. A user may indicate a desire to record a program on remote media server 24 by pressing a "PAUSE" key on remote control 40. A record request is then issued to remote media server 24. Remote media server begins recording the program at that point and until the program is finished or until the user fast-forwards to the end of the cached copy (p. 15, paragraph 165 & p. 19, paragraph 200). The examiner notes that the duration of the content changes over time as more of the content is cached, and that the total recorded duration may depend on whether the user fast-forwards to the end or not. Furthermore, Ellis et al. discloses

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continuing to record a program until the program is finished, automatically caching or temporarily recording all current programs, programs being viewed, or programs for certain subscribers (p. 15, paragraphs 165, 166 & p. 19, paragraph 200). Remote media server 24 may also automatically delete portions of a program that is being real-time cached (p. 16, paragraph 169 & p. 19, paragraph 200). Since Ellis et al. discloses real-time recording and automatic deletion of cached content on a storage medium, the examiner interprets this as “continually updating an allocation of memory in said mass storage device for said at least one of said plurality of content having a variable duration,” as currently claimed.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1-4, 7-16, 25, 27, 28** are rejected under 35 U.S.C. 102(e) as being anticipated by Ellis et al.

Referring to claim **1**, Ellis et al. discloses a method, comprising:

- receiving audiovisual data from a desired transmission channel (the recorder 125 is a process running on processing circuitry 11 of remote media server 24 and may direct the processing circuitry’s one or more tuners to particular channels at particular times. The channels are also received at user television equipment 22 over communication

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- link 20. The processing circuitry 11 is suitable for decoding program files stored on storage 15 and converting them to suitable video signals for distribution by distribution equipment 21)(p. 4, paragraphs 64, 65; p. 5, paragraphs 75, 77; p. 6, paragraph 88; & Figs. 2a-2d);
- if said audiovisual data is not compressed according to a predetermined format, compressing said audiovisual data according to said predetermined format (p. 6, 7, paragraph 89);
 - storing dynamically, in a mass storage device and for a predefined period of time, compressed audiovisual data received from said desired transmission channel according to a title plan generated by a time shift scheduler, wherein said title plan includes a plurality of content, wherein at least one of said plurality of content has a variable duration, wherein storing dynamically comprises continually updating an allocation of memory in said mass storage device for said at least one of said plurality of content having a variable duration (Ellis et al. discloses recording sporting events. Ellis et al. also discloses real-time caching a program in response to a "PAUSE" command until the user catches up with the live program. The examiner notes that the duration of this stored content varies until the program is over or the user fast-forwards to the end of the cached copy)(p. 3, paragraph 60; p. 6, paragraphs 83, 85-87; p. 10, paragraph 122; p. 11, paragraphs 125, 126, 133; p. 12, paragraphs 142, 143; p. 13, paragraphs 148, 149; p. 15, paragraph 165; p. 19, paragraph 200; & Figs. 18a, 25a); and

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- in response to a user request, providing to said user stored compressed audiovisual data beginning with a portion of said stored compressed audiovisual data having associated with it a first temporal parameter (p. 15, paragraphs 163-166 & Fig. 22).

Referring to claim 2, Ellis et al. discloses a method in a system adapted to receive broadcast content on a desired transmission channel from each of a plurality of content sources and forward said received broadcast content to a transport network for distribution to subscribers (the recorder 125 is a process running on processing circuitry 11 of remote media server 24 and may direct the processing circuitry's one or more tuners to particular channels at particular times. The channels are also received at user television equipment 22 over communication link 20. The processing circuitry 11 is suitable for decoding program files stored on storage 15 and converting them to suitable video signals for distribution by distribution equipment 21)(p. 4, paragraphs 64, 65; p. 5, paragraphs 75, 77; p. 6, paragraph 88; & Figs. 2a-2d), the method comprising:

- in response to a title plan generated by a time shift scheduler, wherein said title plan includes a plurality of content, wherein at least one of said plurality of content has a variable duration (Ellis et al. discloses recording sporting events. Ellis et al. also discloses real-time caching a program in response to a "PAUSE" command until the user catches up with the live program. The examiner notes that the duration of this stored content varies until the program is over or the user fast-forwards to the end of the cached copy), storing dynamically said broadcast content in a server and associating with said broadcast content a temporal parameter (p. 7, paragraph 97), wherein storing dynamically comprises continually updating an allocation of memory in a mass storage device for said at least one of said plurality of content having a

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- variable duration (p. 3, paragraph 60; p. 6, paragraphs 83, 85-87; p. 10, paragraph 122; p. 11, paragraphs 125, 126, 133; p. 12, paragraphs 142, 143; p. 13, paragraphs 148, 149; p. 15, paragraph 165; p. 19, paragraph 200; & Figs. 18a, 25a);
- forwarding said broadcast content to said transport network for distribution in accordance with said temporal parameter to a requesting subscriber (the examiner notes that the programs can be distributed according to a schedule in an NVOD approach)(p. 2, paragraph 13 & p. 7, paragraph 91); and
 - in response to a subscriber request for temporally shifted content associated with said broadcast content, forwarding said stored broadcast content to said transport network for distribution to said requesting subscriber (p. 15, paragraphs 163-166 & Fig. 22).

Referring to claim 3, Ellis et al. discloses the method of claim 2, further comprising forwarding to said transport network only the received broadcast content presently requested by any subscriber (p. 7, paragraph 91).

Referring to claim 4, Ellis et al. discloses the method of claim 2, further comprising storing, in said server, broadcast content presently requested by a threshold number of subscribers (p. 6, paragraphs 85, 86).

Referring to claim 7, Ellis et al. discloses the method of claim 2, wherein said storing of said desired broadcast content comprises storing a version of the desired broadcast content to generate a play track (p. 5, paragraph 74 & p. 7, paragraph 91).

Referring to claim 8, Ellis et al. discloses the method of claim 2, further comprising, storing selected broadcast content during a predetermined time interval of a broadcast schedule (p. 5, paragraph 76).

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Referring to claim **9**, Ellis et al. discloses the method of claim 2, wherein said subscriber request for temporally shifted content is initiated by receiving a subscriber title selection from a time shift interactive programming guide screen (p. 15, paragraphs 162, 163 & Fig. 22).

Referring to claim **10**, Ellis et al. discloses the method of claim 2, wherein said subscriber request for temporally shifted content is initiated by receiving a subscriber title selection from a time shift navigation screen (p. 15, paragraphs 162, 163 & Fig. 22).

Referring to claim **11**, Ellis et al. discloses the method of claim 2, wherein said subscriber request for temporally shifted content is initiated by receiving a pause or rewind subscriber selection while broadcasting of said desired content (p. 17, 18, paragraph 185).

Referring to claims **12** and **28**, Ellis et al. discloses a method/system for providing video information in an interactive information distribution system to a plurality of subscribers, comprising:

- receiving a plurality of scheduled broadcast programs on a desired transmission channel in real-time (the recorder 125 is a process running on processing circuitry 11 of remote media server 24 and may direct the processing circuitry's one or more tuners to particular channels at particular times. The channels are also received at user television equipment 22 over communication link 20. The processing circuitry 11 is suitable for decoding program files stored on storage 15 and converting them to suitable video signals for distribution by distribution equipment 21)(p. 4, paragraphs 64, 65; p. 5, paragraphs 75-77; p. 6, paragraph 88; & Figs. 2a-2d);
- selecting a portion of said broadcast programs according to a title plan generated by a time shift scheduler, wherein said title plan includes a plurality of content, wherein at

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- least one of said plurality of content has a variable duration (Ellis et al. discloses recording sporting events. Ellis et al. also discloses real-time caching a program in response to a "PAUSE" command until the user catches up with the live program. The examiner notes that the duration of this stored content varies until the program is over or the user fast-forwards to the end of the cached copy)(p. 3, paragraph 60; p. 6, paragraphs 83, 85-87; p. 10, paragraph 122; p. 11, paragraphs 125, 126, 133; p. 12, paragraphs 142, 143; p. 13, paragraphs 148, 149; p. 15, paragraph 165; p. 19, paragraph 200; & Figs. 18a, 25a);
- processing said selected broadcast programs into temporally adjusted content, such that the temporally adjusted content is associated with said selected broadcast programs (the examiner notes that by recording content, it can be viewed at a different time than when it was aired. The examiner interprets such content to be temporally adjusted (p. 15, paragraph 166);
 - storing dynamically said temporally adjusted content, wherein storing dynamically comprises continually updating an allocation of memory in a mass storage device for said at least one of said plurality of content having a variable duration (p. 10, paragraph 122; p. 11, paragraph 133; p. 15, paragraph 165; p. 19, paragraph 200; & Figs. 18a, 25a);
 - broadcasting said plurality of scheduled broadcast programs to said plurality of subscribers via said desired transmission channel (p. 4, paragraph 64 & p. 6, paragraphs 85, 86); and

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- in a first mode of operation, associating a temporal parameter to said temporally adjusted content and streaming, on-demand, said temporally adjusted content having said temporal parameter to those subscribers viewing said selected broadcast programs currently being broadcast, such that said subscribers may interactively activate such temporally adjusted content contemporaneously with said currently broadcast programs (p. 15, paragraphs 163-66).

Referring to claim **13**, see the claim objection above. Ellis et al. discloses the method of claim 12, further comprising providing a navigator list (directory) to said subscribers having screens presenting said selected broadcast programs having temporally adjusted content for viewing and selection, wherein in an alternate mode of operation, streaming, on-demand, said temporally adjusted content via said navigator list, such that said subscribers may interactively activate such temporally adjusted content during viewership of previously scheduled broadcast programs selected from said navigator list (p. 13, paragraph 145 & Fig. 18a).

Referring to claim **14**, Ellis et al. discloses the method of claim 13, wherein said subscribers may interactively switch between said first mode and said alternate mode of operation (the examiner notes that the remote media server 24 can perform real-time caching of a program, allowing a user to continue watching later. The user can then catch up to the aired program by fast-forwarding. The user could also switch to a different stored program through the directory listing)(p. 13, paragraph 145; p. 15, paragraphs 165, 166; & Fig. 18a).

Referring to claim **15**, Ellis et al. discloses the method of claim 12, wherein said selecting step comprises:

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- monitoring subscriber viewership and selecting those broadcast programs having a viewership exceeding a predetermined metric (p. 6, paragraphs 85, 86 & p. 13, paragraph 148).

Referring to claim **16**, Ellis et al. discloses the method of claim 12, wherein said selecting step further comprises:

- generating title plans for identifying said broadcast programs to be temporally adjusted (p. 15, paragraph 166); and
- defining a temporal availability window for each program (the examiner notes that the remote media server 24 records the program from the position at which the user began recording up to the position of the aired program (p. 15, paragraph 165, 166).

Referring to claim **25**, Ellis et al. discloses the method of claim 12, wherein said first mode of operation further comprises providing an interactive program guide (IPG) to said subscribers having screens presenting said broadcast programs having temporally adjusted content for viewing and selection (p. 13, paragraphs 145-148; & Fig. 18a-d).

Referring to claim **27**, Ellis et al. discloses the method of claim 12, wherein said first mode of operation comprises receiving a temporal control message from a subscriber selected from the group of temporal control messages consisting of pause, rewind, and fast-forward (p. 9, paragraph 111 & p. 15, paragraphs 163, 164).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **5, 6, 17-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. in view of Moeller et al.

Referring to claims **5** and **6**, Ellis et al. discloses the method of claim 2. Ellis et al. further discloses allowing a user to pause, stop, rewind, fast-forward, or play a program at a remote media server (p. 15, paragraph 162). Ellis et al. does not specifically disclose that the step of storing comprises storing a temporally sub-sampled version of the desired broadcast content to generate a fast-forward track. Moeller et al. discloses a system that is capable of transferring or playing a normal play stream at any of various indicated positions or locations (col. 6, l. 45-49). The media server stores fast forward and fast reverse streams in association with normal play streams (col. 4, l. 61-65). The fast forward and fast reverse streams have different presentation rates than the normal play stream and are generated from the normal play stream (col. 6, l. 51-59). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the step of storing in Ellis et al. to include storing fast forward and fast reverse streams in association with a normal play stream, such as that taught by Moeller et al. in order to decrease latency time at a video server.

Referring to claim **17**, Ellis et al. discloses the method of claim 16. Ellis et al. does not disclose that the processing step comprises generating real-time encoded play tracks, fast-forward tracks, rewind tracks, and entry point data (EPD) files associated with each track, said fast-forward and rewind tracks forming said temporally adjusted content. Moeller et al. discloses generating fast forward and fast reverse video streams from a normal play stream (col. 6, l. 55-

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59) and embedding indexing information within the streams to provide for indexing between the streams (col. 9, l. 10-14 & col. 11, l. 39-41). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the processing step of Ellis et al. to include generating fast forward and fast reverse video streams from a normal play stream and embedding indexing information within the streams to provide for indexing between the streams, such as that taught by Moeller et al. in order to efficiently index to different positions in a video stream in a video delivery system (col. 4, l. 20-23).

Referring to claim **18**, the combination of Ellis et al. and Moeller et al. teaches the method of claim 17. Ellis et al. further discloses encoding the broadcast programs identified in the title plan (p. 6, 7, paragraph 89) and buffering said encoded broadcast programs (p. 6, 7, paragraph 89). Ellis et al. does not disclose that the processing step comprises encoding said broadcast programs to form said temporally adjusted programs. Moeller et al. discloses generating compressed fast forward and fast reverse video streams from a normal play stream (col. 6, l. 55-59). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the processing step of Ellis et al. to include generating compressed fast forward and fast reverse video streams from a normal play stream, such as that taught by Moeller et al. in order to decrease latency time at a video server.

Referring to claim **19**, the combination of Ellis et al. and Moeller et al. teaches the method of claim 18. Ellis et al. does not disclose that the processing step further comprises:

- receiving packetized transport streams from at least one encoder; and

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- inserting title identification codes (TICs) to each packet to enable said transport streams to be identified as said real-time encoded play tracks, fast-forward tracks, and rewind tracks.

Moeller et al. discloses generating compressed fast forward and fast reverse video streams from a normal play stream (col. 6, l. 56-59). Moeller et al. further discloses that the encoded stream includes sequence headers that include presentation timestamps and information describing the frame rate and picture size (col. 9, l. 57-62). Moeller et al. further discloses embedding indexing information within the normal play stream and associated trick play streams to provide for indexing between the streams (col. 9, l. 10-14). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the processing step of Ellis et al. to include embedding timestamps, frame rate information, and indexing information within play streams and trick play streams, such as that taught by Moeller et al. in order to decrease latency time at a video server.

Referring to claims **20** and **21**, the combination of Ellis et al. and Moeller et al. teaches the method of claim 19. Ellis et al. does not disclose generating EPD files as fast-forward and rewind tracks are being created. Moeller et al. discloses generating and embedding index information within normal play streams and associated trick play streams to provide for indexing between the streams (col. 9, l. 10-14). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Ellis et al. to include generating and embedding index information within normal play streams and associated trick play streams, such as that taught by Moeller et al. in order to decrease latency time at a video server.

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5. Claims **22-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. in view of Moeller et al. and further in view of Youden et al.

Referring to claim **22**, the combination of Ellis et al. and Moeller et al. teaches the method of claim 19, wherein the storing step includes receiving the buffered encoded broadcast programs (p. 6, 7, paragraphs 89, 90) and storing the real-time play tracks in a plurality of extents (p. 6, paragraphs 82, 83). Neither Ellis et al. nor Moeller et al. disclose that the storing step comprises storing said fast-forward tracks in extents in front to back order and storing said rewind tracks in extents in back to front order. Youden et al. discloses storing selected video data for a FF version in the same order as the original video data is stored and storing the selected video data for the FR version in reverse order to the original version of the video data (col. 4, l. 3-7). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the storing step in the combination of Ellis et al. and Moeller et al. to include storing video data for a FF version in the same order as the original video data is stored and storing the selected video data for the FR version in reverse order to the original version of the video data, such as that taught by Youden et al. in order to decrease latency time at a video server.

Referring to claim **23**, the combination of Ellis et al., Moeller et al., and Youden et al. teaches the method of claim 22, where said storing step further comprises storing selected broadcast programs from a particular channel for a fixed window of time (Ellis et al. p. 6, paragraph 87).

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Referring to claim **24**, the combination of Ellis et al., Moeller et al., and Youden et al. teaches the method of claim 22, where said storing step further comprises storing selected broadcast programs from a plurality of channels (Ellis et al. p. 6, paragraph 88).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL VAN HANDEL whose telephone number is (571)272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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